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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/725,074	12/01/2003	Charles N. Godin	02-1079-B	2730

32940 7590 04/17/2007

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EXAMINER

GORDON, BRIAN R

ART UNIT

PAPER NUMBER

1743

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/17/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/725,074

Applicant(s)

GODIN ET AL.

Examiner

Brian R. Gordon

Art Unit

1743

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12-1-03.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.
2. Claims 4 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. It should be noted that while the device is recited as intended be use with a multiwell plate, the multiwell plate is not positively claimed as an element of the pipette system. It is only required the prior art be structurally capable of interacting with a well plate. Limitations directed to the unclaimed microplate are not further limiting.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claims 23-31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

There are no structural elements or process steps in the claim to determine what applicant is attempting to claim as the invention.

5. Claim 23 provides for the use of a pipette tip array, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claims 23-31 are rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

7. Claims 1-9 and 23-31 are rejected under 35 U.S.C. 102(e) as being anticipated by Shumate et al. US 7,105,132.

Shumate discloses an computer controlled (automated) solution distribution system and method that includes or employs a plurality of liquid handlers where each of the liquid handlers includes a movable table that engages a sample multiwell plate and can align pipettes of the station with different subsets of wells of the multiwell plate where the number of wells of the multiwell plate is a multiple of the number of pipettes of the head of the pipette station (abstract).

The system typically distributes samples between a plurality of multiwell plates having N wells where the number of pipettes in a liquid handler is M. M is an integer multiple, I of N. Each of the plurality of multiwell plates is thus comprised of I subsets of M wells, N total ($M \cdot I$ wells). In this embodiment, the system includes a plurality of liquid handlers to enable parallel processing of multiwell plates. Each liquid handler includes a head movable in a Z-direction with M pipettes and a table configured to engage one of the plurality of multiwell plates and move in an X-Y plane relative to Z (column 3, line 15-25).

In the embodiment of figure 4, a motor is coupled to pistons that produce air displacement in pipettes 247 to control aspiration or dispensation of solution. It is noted that the present invention can support different pipette types. In this embodiment, each station 260 has 96 pipettes in an eight by twelve rectangular configuration.

8. Claims 1-4, 7-9 and 23-31 are rejected under 35 U.S.C. 102(e) as being anticipated by Powers 2004/0033554.

9. Powers disclose an automated method and device for performing biological assays and an improved liquid handling machine for automatically transferring liquid between a plurality of liquid containing wells to prepare culture trays containing semi-solid matrices for use in assays. Preferably, the machine has a head with a plunger assembly mounted on the head, the plunger assembly including a plurality of pipettes having depending ends for receiving tips. A plurality of plungers are respectively disposed within the pipettes, the plungers being movable coaxially within the pipettes to vary their internal volumes.

As shown in FIGS. 2 and 8 the head 12 supports a pipette and plunger assembly 34. This assembly includes a plurality of pipettes 36 that are arranged in a row transverse to the axis of translation of the table 10. The pipettes are removably attached to the head by means of a mounting block 37 and connecting pins 33 so that different pipette assemblies having more or fewer pipettes can be readily interchanged [000218].

Preferably, one station, such as station 100, accommodates a tray 56 which holds a plurality of the disposable pipette tips 62 in an array of receptacles 63 (see also FIGS. 1 and 4). As described above, disposable pipette tips 62 are temporarily positioned on the ends of pipettes 36 (see FIG. 3) and are used to avoid cross contamination when multiple assay samples of different compounds or compound concentrations are being prepared, a new tip being used to transfer fluid for each different concentration or compound [0024].

10. Claims 1-9, 15, and 23-31 are rejected under 35 U.S.C. 102(e) as being anticipated by Ingenhoven et al. US 6,869,571.

Ingenhoven et al. disclose a device (1) for aspirating and dispensing liquid samples having a pump (2), which comprises a cylindrical chamber (3), a piston (4) movable in this cylindrical chamber, and a piston drive (5) engaging on the piston. The device additionally comprises a pulse generator (6), which effects dispensing of samples from a liquid by generating pressure waves in this liquid and a tip (8) connected via a line (7) with the cylindrical chamber (3), with the piston drive (5) comprising a first drive (9) and a second drive (10), implemented as a pulse generator (6) (abstract).

The device can be a system having n devices, or at least such a system having n pumps 2, n lines 7, and n tips 8, having a first drive 9 and a second drive 10 and having m pulse generators which only needs $1/n$ of the dispensing time of a single device equipped with one of each of these components. The time factor thus plays a significant role during the filling of high-density microplates. These considerations are particularly significant if n is a multiple of 4--particularly 8, 96, or 384--and m is a whole number--particularly 1, 2, or 3 (column 3, last paragraph).

Notwithstanding the illustration in FIG. 1, the tip 8 for pipetting liquids can be embodied as a needle made of materials other than steel, or as a disposable plastic tip. Generally, the transition from the cylindrical chamber 3 to the tip 8 is then preferably produced with a so-called tip adapter 8'. Such a tip adapter is preferably produced from

stainless-steel and is molded and outfitted in such a way that a secure and tight seat for a needle or disposable tip, produced, for example, from plastic, is ensured.

11. Claims 17-31 are rejected under 35 U.S.C. 102(b) as being anticipated by Bennett et al. US 4, 444,062.

Bennett et al. discloses liquid transfer device having a plunger mounted for sliding movement within a hand-held housing, a plurality of rods projecting from said plunger, a barrel section having a plurality of through-passages formed therein equal in number to the number of said rods, means for detachably connecting said barrel means to said housing and elastic diaphragm means adapted to be secured intermediate said housing and barrel means whereby said rods will press said diaphragm into said passages when said barrel means is connected to said housing. The diaphragm can be connected either to the housing over the ends of said rods or may be connected to the barrel means over the passages and the entire barrel means may be formed of plastic material for disposal after a single use. In the disposable form the diaphragm may be of relatively thin material since it does not have to be heavy enough to withstand repeated uses (column 2, line 34).

An elastic rubber membrane 24 of latex completely overlies the recess 16 and the ends of the rods protruding therefrom and the periphery of the membrane is secured in the groove 22 by means of an endless O-ring 26 having dimensions suitable for press fitting the O-ring into the groove 22.

As seen in Figure 1 the membrane is secured to the upper frame and sandwiched between the two respective sections of the frame.

Threaded apertures 56 and screws 54 help align and claim the portions of the frame together.

Claim Rejections - 35 USC § 103

12. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

13. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

14. Claims 5-6, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Powers.

While Powers illustrates an array of 12 pipettes, Powers fails to specify an arrangement of 4 or 16 tips or the shape of the array.

However as given above it is stated the device can be modified to include more or less tips in any further desired arrangement to correspond with other plat formats. Furthermore it would have been obvious to recognize the disposable material from the tips are manufacture to be plastic for plastic is conventionally known as a low-cost material for manufacturing disposable tips.

15. Claims 10-14 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bennett et al. as applied to claims 173-31 above, and further in view of Powers, Ingenhoven et al., or Shumate et al.

Bennett et al. does not disclose the device as being automated.

While a mechanical or automatic means to replace manual activity which has accomplished the same result involves only routine skill in the art, Powers, Ingenhoven et al., or Shumate et al. disclose automated pipette devices.

It would have been obvious to one of ordinary skill in the art at the time of the invention to automate the operation the device of Bennett et al. for automated pipettes are conventionally known in the art to ensure accurate handling of liquid and streamlining various methods as well.

Conclusion

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Tajima; Hideji et al.; Panzer; Armin et al.; Hamel; Marc F. et al.; Ingenhoven; Nikolaus et al.; Friswell; David R. et al.; Lehtinen; Kauko et al.; Maeda; Yoshio; Bienert; Klaus et al.; Yiu; Felix H.; Yahiro; Kanji; Astle; Thomas W.; Bennett;

Art Unit: 1743

John T. et al.; Hoummady; Moussa; Lancaster; Jesse F. disclose multiple-channel pipettes.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian R. Gordon whose telephone number is 571-272-1258. The examiner can normally be reached on M-F, Telework Thurs., 1st Fri. Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on 571-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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